

# MIF Status Report

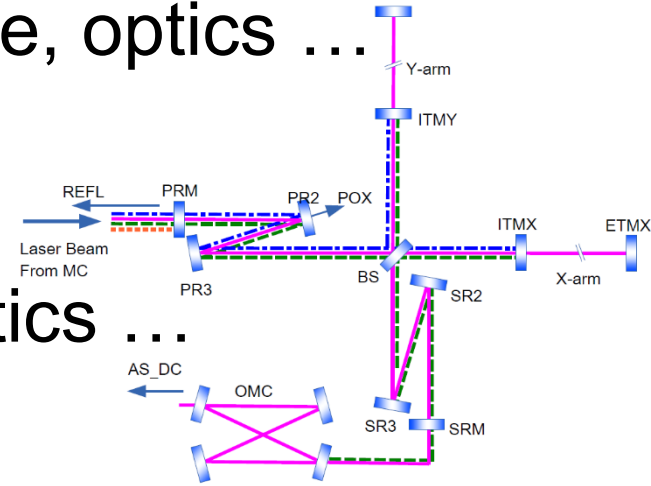
Yuta Michimura

Department of Physics, University of Tokyo

on behalf of the Main Interferometer subgroup

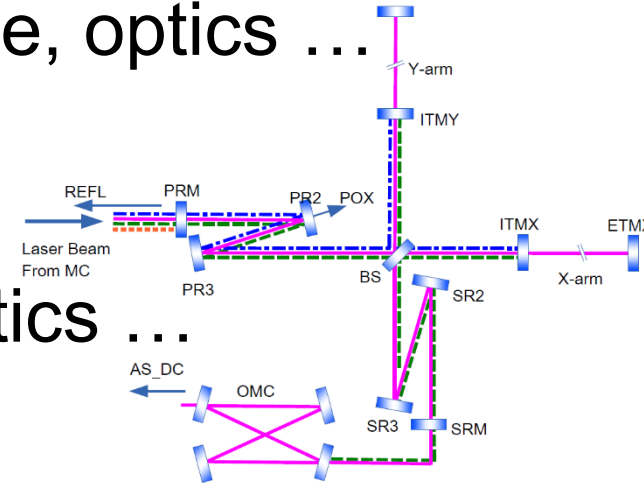
# Tasks for MIF Subgroup

- **Design** the Main Interferometer including layout, controls scheme, optics ...  
→ DONE
- Derive noise **requirements** for suspensions, electronics, optics ...  
→ mostly DONE
- **Instrumentation** of detection optics including optics, photodiodes, cabling, electronics  
→ ON GOING
- Interferometer **commissioning** including initial alignment, mode-matching, integration of signals to DAQ system, etc.



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**It seems like EO people think commissioning tasks are for “commissioning team” lead by ON-SITE people**

# MIF Members FY2016

- Yuta Michimura (Chief, UTokyo) **off-site**
- Yoichi Aso (Sub-chief, NAOJ, VIS) **on-site**
- Osamu Miyakawa (ICRR, AEL/DGS) **on-site**
- Keiko Kokeyama (ICRR, DGS) **on-site**
- Eiichi Hirose (ICRR, MIR) **off-site**
- Tomotada Akutsu (NAOJ, AOS) **off-site**
- Yutaro Enomoto (ICRR) **off-site**
- Kentaro Komori (UTokyo) **off-site**
- Naoki Aritomi (UTokyo) **off-site**
- Tomofumi Shimoda (UTokyo) **off-site**
- Koji Arai (Caltech) – support **off-site**
- Hiroaki Yamamoto (Caltech) – support **off-site**

# Updates from F2F Aug 2016

- Concluded that PRMI by March 2018 is not feasible considering the schedule ([JGW-T1605595](#))
- Output optical tables and related tasks are moved from IOO to MIF
- Sideband frequencies for IMC and ALS decided
  - IMC: 13.78 MHz ([JGW-T1605493](#))
  - ALS: 32 MHz and 33 MHz ([JGW-T1605626](#))
- Some modeling had notable progress
  - OMC suspension
  - ALS NoiseBudget
  - Cryopayload actuator design
- More RF electronics were requested to AEL

# bKAGRA Readiness

Not ready ← → Ready

	Phase 1	Phase 2	Phase 3
Analog Electronics	requested to AEL	some not yet designed	not yet designed
Digital Control	small modification	major modification	major modification
Initial alignment	planned	vague plan	-
Output tables	some designed	no design	upgrade?
ALS	-	modeling	upgrade?
Modeling	mostly complete	exists but not fully	exists but not fully
OFI / OMC	-	designing	upgrade?